normal development of the primordia and the compound sporophores, the blue-violet end of the spectrum being the only stimulating portion. In many cases the mycelia remained absolutely sterile when kept in darkness or when exposed only to yellow light.

In his preface to Heft VII the indefatigable author promises to return to the smuts in Heft IX and to the *Ascomycetes* in X and the following Heften. We trust he may be spared life and daylight to the completion of his great task, the material for which he tells us is already in good part accumulated and only remains to be put into proper shape.—ERWIN F. SMITH.

MIYABE, KINGO. *On the life history of Macrosporium parasiticum*, Thüm. Annals of Botany, February, 1889.

The investigations, the results of which are set forth in this paper, were carried on at Harvard University under the direction of Dr. Farlow, the material for study, consisting of onion plants, having been sent to him from Bermuda. Without going into the details of the work it may be said that Mr. Miyabe concludes that *Macrosporium parasiticum*, Thüm., is the same as *Macrosporium sarcinula*, Berkeley, and that both of these so-called species are merely forms of the common *Pleospora herbarum*. He further shows that there are only two forms of the *Pleospora*, *i. e.*, the *ascosporous* and the *Macrosporium*, and remarks in his recapitulation that the presence of pycnidia is very doubtful, and may have disappeared from the fungus cycle of development altogether. It is shown that the formation of the perithecia is not attended by any sexual act, and finally that the *Macrosporium*, contrary to the usual belief, is a true parasite, having power of developing within the tissues of plants not previously injured by fungi or other causes.—B. T. GALLOWAY.

LAGERHEIM, G. *Ueber einige neue oder bemerkenswerthe Uredineen.* Hedwigia Band XXVIII, Heft 2, p. 103.

In this paper are given the results of some recent observations on several genera of *Uredineæ*, the first of which is *Diorchidium*. This genus, according to the author, was established by Kalchbrenner in 1883 from specimens occurring on *Milletia caffra*, collected at Port Natal, South Africa. It differs from *Puccinia* in having teleutospores divided by perpendicular or oblique instead of horizontal cross-walls. Soon after the attention of mycologists was directed to this peculiar genus, new species were found, the first among these being *Diorchidium lævе*, Sacc. & Bizz., on *Manisurus granulis* from Brazil, and *Diorchidium pallidum*, Winter, on an undetermined host plant from the same place. Later, De Toni in Sylloge VII, p. 736, referred *Triphragmidium binatum*, Berkeley, on an undetermined host plant from Nicaragua, and *Puccinia verti-septa*, Tracy & Galloway, on *Salvia ballatæflora*, from New Mexico, to the same genus. In the case of *D. pallidum* and *D. verti-septa* uredo-